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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/593,158 | 06/14/2000 | Wataru Uchida | Q59650 | 8318 |
| 7590 | 06/09/2004 | | EXAMINER | |
| J Frank Osha Sughrue Mion Zinn Macpeak & Seas PLLC 2100 Pennsylvania Avenue N W Washington, DC 20037-3213 | | | MILLER, BRANDON J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2683 | |
| DATE MAILED: 06/09/2004 | | | | |

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Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/593,158 | UCHIDA, WATARU |
| | Examiner | Art Unit |
| | Brandon J Miller | 2683 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 4/5/04.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-7 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trompower in view of Reed and Kanbara.

Regarding claim 1 Trompower teaches a mobile terminal that notifies a base station of a data transmission rate to be used by the mobile terminal, when the mobile terminal starts communication (see col. 16, lines 16-21). Trompower teaches mobile stations capable of dynamically modifying their data transmission parameters (see col. 12, lines 35-39 & 60-61). Trompower teaches detecting a residual amount of battery power and regulating the power level of transmission, on the basis of residual amount of battery power (see col. 7, lines 4-7). Trompower teach regulating a data transmission rate (see col. 16, lines 16-21). Trompower does not specifically teach an input means for inputting a data transmission rate, or regulating a data transmission rate on the basis of a residual amount of battery power. Reed teaches inputting resource sensitivity indicators for a higher data transmission rate (see col. 7, lines 1-6). Reed teaches regulating a data transmission rate of the basis of a residual amount of battery power (see col. 7, lines 1-5 & 8-10). Kanbara teaches inputting a data transmission rate (see col. 3, lines 39-43). It would have been obvious to one of ordinary skill in the art at the time the invention was

made to make the device adapt to include an input means for inputting a data transmission rate and regulating a data transmission rate on the basis of a residual amount of battery power because this would allow for an improved allocation of system resources to subscribers of a wireless communication system.

Regarding claim 5 Trompower teaches a power consumption suppressing method for a mobile terminal that notifies a base station of a data transmission rate to be used by the mobile terminal, when the mobile terminal starts communication (see col. 7, lines 4-7 and col. 16, lines 16-21). Trompower teaches detecting a residual amount of battery power and regulating the power level of transmission, on the basis of residual amount of battery power (see col. 7, lines 4-7). Trompower does teach regulating a data transmission rate (see col. 16, lines 16-21).

Trompower teaches notifying the base station of the regulated data transmission rate (see col. 16, lines 18-21). Trompower does not specifically teach inputting a data transmission rate, or regulating a data transmission rate on the basis of a residual amount of battery power. Reed teaches inputting resource sensitivity indicators for a higher data transmission rate (see col. 7, lines 1-6). Reed teaches regulating a data transmission rate of the basis of a residual amount of battery power (see col. 7, lines 1-5 & 8-10). Kanbara teaches inputting a data transmission rate (see col. 3, lines 39-43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include an input means for inputting a data transmission rate and regulating a data transmission rate on the basis of a residual amount of battery power because this would allow for an improved allocation of system resources to subscribers of a wireless communication system.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trompower in view of Reed.

Regarding claim 4 Trompower teaches a mobile communication system, using a plurality of data transmission rates (see col. 15, lines 20-22). Trompower teaches a base station for controlling data communications in a service area and executing communication services (see col. 16, lines 27-35). Trompower teaches a plurality of mobile terminals for requesting communication, by deciding a transmission data rate of an upward signal toward a base station, on the basis of the transmission of a downward signal from a base station (see col. 16, lines 16-23). Trompower teaches transmission power of a downward signal from a base station (see col. 7, lines 6-10). Trompower does not specifically teach deciding a transmission data rate on the basis of a residual battery power. Reed teaches regulating a data transmission rate of the basis of a residual amount of battery power (see col. 7, lines 1-5 & 8-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include deciding a transmission data rate on the basis of a residual battery power because this would allow for an improved allocation of system resources to subscribers of a wireless communication system.

Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trompower in view of Reed and Kanbara and Hayashi.

Regarding claim 2 Trompower, Reed, and Kanbara teach a device as recited in claim 1 except for a transmission power control unit which receives a downward signal from a base station and controls a transmission power of an upward signal from a base station, depending upon an electric field strength of the downward signal, wherein the communication rate

regulating means regulates the data communication rate, on the basis of both residual amount of battery power and an electric field strength. Trompower does teach a transmission power control unit that receives a downward signal from a base station and controls a transmission power of an upward signal from a base station (see col. 7, lines 7-11). Trompower does teach regulating a data transmission rate (see col. 16, lines 16-21). Reed does teach regulating a data transmission rate of the basis of a residual amount of battery power (see col. 7, lines 1-5 & 8-10). Hayahsi teaches communication rate regulating on the basis of both a residual amount of battery power and electric field strength (see abstract and col. 2, lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include regulating a data transmission rate based on residual amount of battery power and electric field strength because this would allow for two-way transmission power control.

Regarding claim 6 Trompower, Reed, Kanbara, and Hayashi teach a device as recited in claim 2 and is rejected given the same reasoning as above.

Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trompower in view of Reed, Kanbara, Hayashi and Tiedemann, Jr.

Regarding claim 3 Trompower teaches communication rate regulating means (see col. 15, lines 18-24). Trompower teaches calculating an estimated battery holding time, on the basis of residual amount of battery power (see col. 7, lines 4-7). Trompower teaches notifying a base station of a lower data transmission rate, on the basis of transmission capabilities (see col. 13, lines 8-15). Trompower does not specifically teach estimating a battery holding time based on electric field strength, a table for storing battery holding times, searching one of a battery holding time that is equal to an estimated holding time, reading out one of a prescribed maximum data

transmission rate corresponding to the searched battery holding time table, or comparing the read-out maximum data transmission rate with the data transmission rate. Hayahsi teaches communication rate regulating on the basis of both a residual amount of battery power and electric field strength (see abstract and col. 2, lines 1-5). Tiedemann, Jr. teaches calculating an estimated transmission power on the basis of an amount of transmission power (see col. 9, lines 48-55). Tiedemann, Jr. teaches searching one of a prescribed transmission power holding times which is equal to an estimated holding time in a table, reading out one of a prescribed maximum data transmission rate corresponding to a searched transmission power and comparing a read-out maximum data transmission rate (see col. 6, lines 35-43 and col. 9, lines 32-38 & 48-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include estimating a battery holding time based on electric field strength, a table for storing battery holding times, searching one of a battery holding time that is equal to an estimated holding time, reading out one of a prescribed maximum data transmission rate corresponding to the searched battery holding time table, and comparing the read-out maximum data transmission rate with the data transmission rate between mobile terminals while minimizing the consumption amount of electric energy.

Regarding claim 7 Trompower teaches a power consumption suppressing method (see col. 7, lines 4-7 and col. 15, lines 18-24). Trompower teaches calculating an estimated battery holding time, on the basis of residual amount of battery power (see col. 7, lines 4-7). Trompower teaches notifying a base station of a lower data transmission rate, on the basis of transmission capabilities (see col. 13, lines 8-15). Trompower does not specifically teach estimating a battery holding time based on electric field strength, a table for storing battery

holding times, reading out one of a prescribed maximum data transmission rate corresponding to the searched battery holding time table, or comparing the read-out maximum data transmission rate with the data transmission rate. Hayahsi teaches communication rate regulating on the basis of both a residual amount of battery power and electric field strength (see abstract and col. 2, lines 1-5). Tiedemann, Jr. teaches calculating an estimated transmission power on the basis of an amount of transmission power (see col. 9, lines 48-55). Tiedemann, Jr. teaches searching one of a prescribed transmission power holding times which is equal to an estimated holding time in a table, reading out one of a prescribed maximum data transmission rate corresponding to a searched transmission power and comparing a read-out maximum data transmission rate (see col. 6, lines 35-43 and col. 9, lines 32-38 & 48-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include estimating a battery holding time based on electric field strength, a table for storing battery holding times, searching one of a battery holding time that is equal to an estimated holding time, reading out one of a prescribed maximum data transmission rate corresponding to the searched battery holding time table, and comparing the read-out maximum data transmission rate with the data transmission rate between mobile terminals while minimizing the consumption amount of electric energy.

Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2683

Minamisawa U.S. Patent 6,026,303 discloses a method for determining optimal parent terminal and ad hoc network system for the same.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 703-305-4222. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 2, 2004


WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600